NEWS RELEASE

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Closer look at recent storm data, flooding

Two rainstorms in late August just a few days apart caused flooding throughout Hampton, raising concerns about the stormwater system's ability.

While official rainfall totals at Langley Air Force Base recorded about 8 inches of rainfall over Aug. 25-28, other measures showed parts of the city received far more rain. According to the National Weather Service data, parts of Hampton received 15 inches of rain in those storms.

Weather forecasters consider the two storms 100- to 500-year events. What that means, according to Bill Sammler of the weather service, is a 100-year event has a 1 percent chance of occurring in any year. It does not mean only one will occur every 100 years. Hampton got two within a 4-day period.

Even the four-day totals don't tell the entire story. Looking at the rainfall data and timeframes help explain why the stormwater system was swamped. For example, in a hurricane or tropical storm, such as an Irene or a Floyd, the area can see 12-15 inches of rain over a 24-hour period. That tends to fall fairly steadily, though, maybe at an inch per hour.

What happened in parts of Hampton on Aug. 25 was a much faster rate of rainfall that overwhelmed systems, according to rainfall measured at some of the city's pump station rain gauges. While parts of the city received about an inch per hour, other parts received much more. The Westview Drive station recorded more than 12½ inches of rain in 4 hours, the Village Drive station recorded more than 13 inches, and the Marcella Road station saw more than 8 inches in that time frame.

The second storm, on Aug. 28, hit harder in some different areas. In a 3-hour period, these pump stations recorded rain of: 9 inches on Ambrose Lane and King Street; nearly 12 inches on Newport News Avenue; and nearly 11 inches in Riverdale.

Some areas were hit hard in both storms, with both Marcella Road and Village Drive seeing more than 7½ inches in the second storm – pushing the total from the two storms above 15 inches in those areas.

Lynn Allsbrook, Hampton's city engineer and deputy director of public works, said the systems that handle runoff are working as they should. It's just not economically feasible to build a stormwater system that can immediately drain streets when rain is falling at a rate of 3-4 inches per hour for several hours.

Hampton has been maintaining city drainage ditches. A recently completed project improved the Farmington canal, at a cost of three-quarters of a million dollars. The city is completing plans to enlarge the Pennwood canal next. Work on the project, which has an estimated cost of $1.1 million, will begin early next year. The city is also planning to install a stormwater pond at Forrest Elementary School. Construction is slated to begin in three years and will cost approximately $800,000.

A citizen waterways panel gave City Council its report on more than a year's worth of examination of water-related issues last year as part of the Community Plan update. Recent additions to staff have included a full-time grant writer and a stormwater engineer, and the city's 5-year capital spending blueprint includes $19 million in waterways projects. In addition, the city has started a revolving loan fund to help property owners who have repeat flooding issues with flood-protection projects and has received federal grants to help homeowners raise their homes.

Hampton has seen some unusual weather in the past year, and areas that don't usually flood have seen flooding. Does that – and two 100-year storms in a week – mean we should expect more such storms?

The weather service's Bill Sammler said there are some conditions that are exacerbating flooding throughout the region – sea-level change, as well as development that has over time replaced water-absorbing soil with impervious areas that add to runoff – but there is no evidence of a pattern based on recent events. Weather forecasters typically look at 100 years of data, he said, and there's nothing yet that would suggest the August storms were anything other than freak occurrences.